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The Trusted Integrator for Sustainable Solutions

REMOVAL SUPPORT TEAM 3
EPA CONTRACT EP-S2-14-01

February 26, 2019

Mr. Gezahegne Bushra, On-Scene Coordinator
U.S. Environmental Protection Agency, Region II
Removal Action Branch
2890 Woodbridge Avenue
Edison, NJ 08837

EPA CONTRACT No: EP-S2-14-01

TDD No: TO-0370-0117

DC No.: RST3-05-F-0055

**SUBJECT: REMOVAL ACTION SAMPLING REPORT
PORT REFINERY SITE (55 HILLANDALE ROAD)
RYE BROOK, WESTCHESTER COUNTY, NEW YORK**

Dear Mr. Bushra,

Enclosed please find the Removal Action Sampling Report which summarizes the indoor air sampling activities conducted by the U.S. Environmental Agency (EPA) with the support of Weston Solutions, Inc., Removal Support Team 3 (RST 3) at 55 Hillandale Road [the Port Refinery Site (the Site)] located in Rye Brook, Westchester County, New York. The indoor air sampling event was conducted on February 5, 2019. The U.S. Environmental Protection Agency comments in regards to the draft version of this deliverable (Document Control Number RST3-05-D0144) have been incorporated.

If you have any questions or comments, please contact me at (908) 565-2974.

Sincerely,

WESTON SOLUTIONS, INC.

Michael Lang
RST 3 Site Project Manager

Enclosure
cc: TDD File: TO-0370-0117

an employee-owned company



In association with Scientific and Environmental Associates, Inc.,
Environmental Compliance Consultants, Inc., Avatar Environmental, LLC,
On-Site Environmental, Inc., and Sovereign Consulting, Inc.

REMOVAL ACTION SAMPLING REPORT

PORT REFINERY SITE (55 HILLANDALE ROAD)

Rye Brook, Westchester County, New York

SSID No: 027T
EPA ID No: NYD986954048

DC No: RST3-05-F-0055
TDD No: TO-0370-0117
EPA Contract No: EP-S2-14-01

Prepared for:

U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, New Jersey 08837

Prepared by:

Removal Support Team 3
Weston Solutions, Inc.
Federal East Division
Edison, New Jersey 08837

February 2019

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1.0 Introduction

In December 2018, the U.S. Environmental Protection Agency (EPA), Region II Removal Action Branch (RAB) was contacted by the owner of the property located at 55 Hillandale Road in Rye Brook, New York. During the phone call, the owner requested that indoor air testing of the home be conducted as a follow up to the mercury mitigation Removal Action conducted by EPA in 1991-1996 and 2004-2007. In response to the indoor air testing request, EPA met with the owner on January 31, 2019 to inspect the home and to develop an interior sampling strategy. On February 5, 2019, the EPA Region II RAB, with the support of Weston Solutions, Inc., Removal Support Team 3 (RST 3), performed an indoor air sampling event at the residence on the property. All the indoor air samples collected were submitted to the assigned laboratory for mercury analysis. This report describes the work performed and provides the results of the indoor air investigation.

1.1 Site Location and Description

The Site consists of a 0.67-acre residential parcel located at 55 Hillandale Road in Rye Brook, Westchester County, New York. The geographic coordinates of the Site are 41° 1' 42" north latitude and 73° 40' 26" west longitude. The Areas of Concern (AOCs) for this air sampling event were the basement, first floor, and second floor of the house.

Refer to Attachment A, Figure 1: Site Location Map and Figure 2: Sample Location Map

2.0 Scope of Work

RST 3 was tasked by the EPA to perform indoor air sampling at 55 Hillandale Road. The air samples were collected using air sampling pumps and sampling media at a low flow rate over an 8-hour period of time, and subsequently submitting the samples to the assigned laboratory for mercury analysis.

3.0 On-Site Personnel

Name	Affiliation	Duties On-site
Gezahegne Bushra	EPA, Region II	On-Scene Coordinator
Michael Lang	Weston Solutions, Inc. RST 3, Region II	Site Project Manager, Site H&S, Site QA/QC, Sample Collection, and Sample Management

EPA: U.S. Environmental Protection Agency
QA/QC: Quality Control/Quality Assurance

RST 3: Removal Support Team 3
H&S: Health and Safety

4.0 Summary of Site Activities and Observations

On February 5, 2019, RST 3 utilized air sampling pumps and sampling media to collect air samples from seven locations determined by the EPA OSC within the on-site AOCs. The selected sampling locations included areas of the basement adjacent to two sumps (ASL01 and ASL02), from the radon ventilation pipe (ASL03) in the basement, the breakfast room (ASL04) and the study/den (ASL05) on the first floor, and two bedrooms on the second floor (ASL06 and ASL07). Sample ASL03 was obtained through a hole drilled into the pipe to allow for sample media to be placed inside the pipe for sample collection. Following the completion of sample collection at ASL03, the hole in the pipe was sealed with caulk and white duct tape. It should be noted that the air

sampling pump deployed at ASL06 failed shortly after starting sample collection earlier in the morning. Upon observing the failed pump, a replacement pump was utilized to continue sample collection.

All the air samples collected were submitted to the assigned laboratory for mercury analysis, and all Site activities were noted in the Site logbook and documented with photographs.

Refer to Attachment A, Figure 2: Sample Location Map and Attachment C: Photographic Documentation Log

5.0 Air Sampling Methodology

Air samples were collected in accordance with EPA's Environmental Response Team (ERT)/Scientific Engineering Response and Analytical Services (SERAS) contractor's Standard Operating Procedure (SOP) Nos. 2001: *General Field Sampling Guidelines* and 2008: *General Air Sampling Guidelines*, and National Institute for Occupational Safety and Health (NIOSH) Method 6009. Air samples were collected using air sampling media consisting of sorbent tubes [6 x 70 millimeter (mm) size, 200 milligram (mg) sorbent] and GilAir pumps with flow rates set between 0.15 and 0.25 liters per minute (L/min) for a period of eight hours. Due to initial pump failure at ASL06, the flow rate of the replacement pump was set at 0.40 L/min in order to continue sample collection and achieve a suitable sample volume. A total of eight air samples, including one field duplicate, were collected from seven indoor locations during the air sampling event. All sample information was transcribed into EPA's SCRIBE sample management database from which sample labels and chain of custody (COC) record were generated. A sample label was attached to each sorbent tube prior to being stored in a shipping cooler. All the air samples were submitted to the assigned laboratory for mercury analysis.

Refer to Attachment B, Table 1: Sample Collection Information Table

6.0 Laboratory Receiving Samples

The following laboratory was utilized during the February 2019 Removal Action air sampling event:

Laboratory	Sample Matrix	Analysis
TestAmerica Laboratories, Inc. 4625 East Cotton Center Boulevard, Suite 189 Phoenix, Arizona 85040	Air	Mercury

7.0 Sample Collection and Dispatch

On February 5, 2019, RST 3 collected a total of eight air samples (seven sampling points plus one field duplicate) from the Site. On February 5, 2019, all eight air samples were shipped under COC Record No. 2-020519-0370-0117-0001 via FedEx Airbill No. 7743 9982 7209 to TestAmerica Laboratories, Inc. located in Phoenix, Arizona for mercury analysis via NIOSH method 6009.

Refer to Attachment D: Chain of Custody Record

8.0 Analytical Results Summary

The validated analytical results of the air samples collected at the Site during this sampling event were compared with the EPA Regional Screening Level (RSL) of 0.31 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for mercury in Residential Air corresponding to 10^{-6} risk level for carcinogens or a hazard quotient of 1 for non-carcinogens (revised November 2018).

Based on the validated analytical results, concentrations of mercury were not detected above the laboratory reporting limit in any of the eight air samples.

Refer to Attachment B, Table 2: Validated Air Analytical Results Summary Table – Mercury and Attachment E: Validated Laboratory Analytical Data

9.0 Conclusion

On February 5, 2019, RST 3 performed indoor air sampling at the request of EPA at the 55 Hillandale Road property. The owner of the house plans to sell the house and asked EPA to conduct a sampling event to confirm that interior air conditions remained at acceptable levels. A total of eight air samples, including one field duplicate, were collected from seven locations identified on-site by the EPA OSC during the sampling event. The air samples were submitted to the assigned laboratory for mercury analysis. After the laboratory analytical results of the eight air samples including the field duplicate were validated, it was determined that mercury was not detected in concentration above the laboratory reporting limits and EPA's Regional Screening Level of $0.31 \mu\text{g}/\text{m}^3$.

Refer to Attachment B, Table 2: Validated Air Analytical Results Summary Table – Mercury

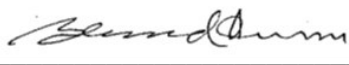
Report prepared by:



Michael Lang
RST 3 Site Project Manager

2/26/2019
Date

Report reviewed by:



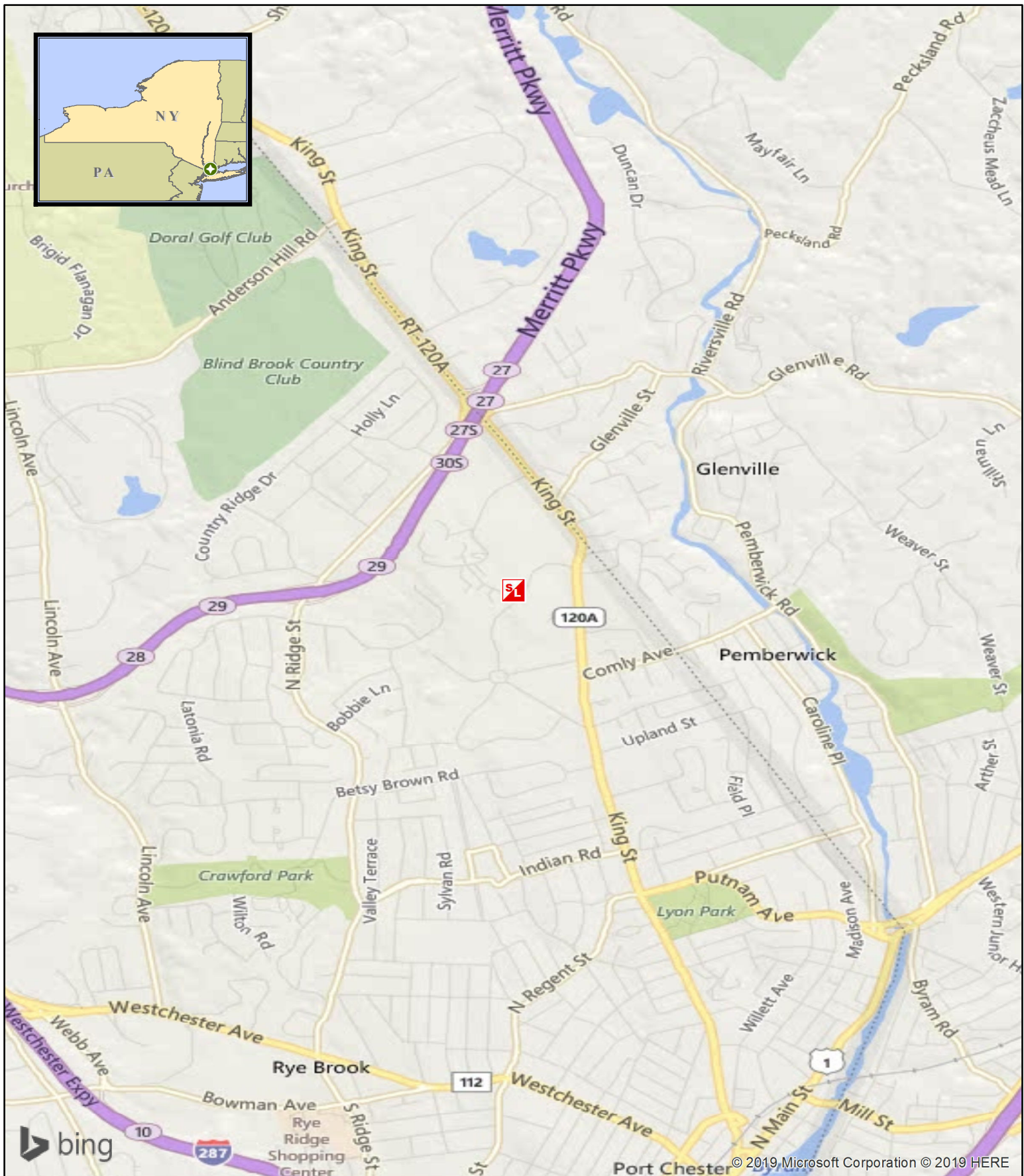
Bernard Nwosu
RST 3 Group Leader

2/26/2019
Date

Attachment A

Figure 1: Site Location Map

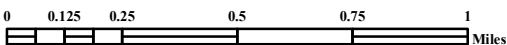
Figure 2: Sample Location Map



Legend



Site Location



Weston Solutions, Inc.
East Division

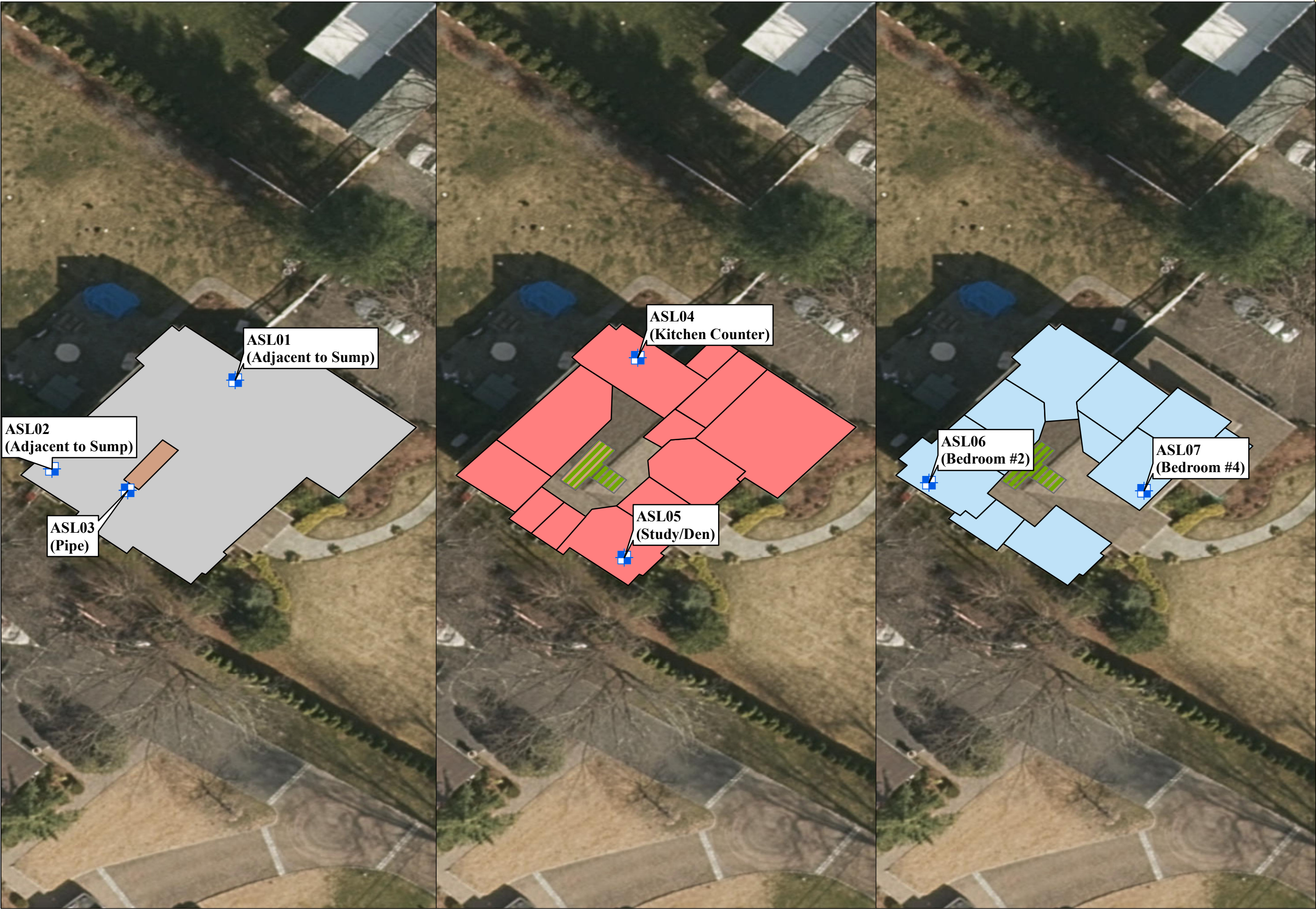
In Association With
Scientific and Environmental Associates, Inc.,
Environmental Compliance Consultants, Inc.,
Avatar Environmental, LLC, On-Site Environmental,
Inc. and Sovereign Consulting, Inc

Figure 1: Site Location Map

Port Refinery (55 Hillandale Road)
Rye Brook, NY

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DATE MODIFIED: 2/25/2019	
GIS ANALYST:	M. LANG
EPA OSC:	G. BUSHRA
RST SPM:	M. LANG
CHARGE #:	TO-0370-0117



SCALE
1:303

- LEGEND**
- Sample Locations
 - Basement
 - First Floor
 - Second Floor
 - Stairs (Basement)
 - Stairs

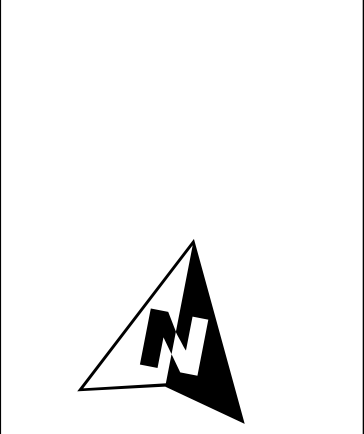


Figure 2: Sample Location Map

**Port Refinery Site (55 Hillandale Road)
Rye Brook, New York**

**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01**

Weston Solutions, Inc.

In Association With
Scientific and Environmental Associates, Inc.,
Environmental Compliance Consultants, Inc.,
Avatar Environmental, LLC, On-Site Environmental,
Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	M. MANNINO
EPA OSC:	G. BUSHIRA
RST 2 SPM:	M. LANG
FILENAME:	190214_SmpLocMap
FIGURE:	2
REVISION:	0.0
DATE MODIFIED:	2/25/2019



Attachment B

Table 1: Sample Collection Information Table

Table 2: Validated Air Analytical Results Summary Table - Mercury

Table 1: Sample Collection Information Table
 Port Refinery Site (55 Hillandale Road)
 Rye Brook, Westchester County, New York
 February 5, 2019

RST 3 Sample Number	Location	Sub Location	Sample Type	Matrix	Analysis	Sample Media	Start			Stop			Total Volume (Liters)	Total Time (Minutes)	Average Flow Rate (L/min)
							Date	Time	Flow Rate (L/min)	Date	Time	Flow Rate (L/min)			
190205-ASL01-AS01-01	ASL01	Basement Adjacent to Sump	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	6:53	0.23989	2/5/2019	15:04	0.22370	113.81	491	0.2318
190205-ASL01-AS08-01	ASL01	Basement Adjacent to Sump	Field Duplicate of 190205-ASL01-AS01-01	Air	Mercury	Anasorb 200 mg tube	2/5/2019	7:11	0.26210	2/5/2019	15:05	0.26375	124.61	474	0.2629
190205-ASL02-AS02-01	ASL02	Basement Adjacent to Sump	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	6:56	0.23946	2/5/2019	15:05	0.24107	117.51	489	0.2403
190205-ASL03-AS03-01	ASL03	Pipe in Basement	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	7:03	0.15818	2/5/2019	15:06	0.18535	82.98	483	0.1718
190205-ASL04-AS04-01	ASL04	1st Floor Breakfast Area	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	7:07	0.27108	2/5/2019	15:12	0.271534	131.58	485	0.2713
190205-ASL05-AS05-01	ASL05	1st Floor Den	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	7:09	0.24632	2/5/2019	15:15	0.25533	121.89	486	0.2508
190205-ASL06-AS09-01	ASL06	2nd Floor Bedroom 1	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	11:45	0.40660	2/5/2019	15:04	0.41770	82.03	199	0.4122
190205-ASL07-AS07-01	ASL07	2nd Floor Bedroom 2	Field Sample	Air	Mercury	Anasorb 200 mg tube	2/5/2019	7:16	0.25476	2/5/2019	15:03	0.25508	119.04	467	0.2549

Notes:
 RST 3 - Removal Support Team 3
 L/min - Liters per minute
 mg- milligram

Table 2: Validated Air Analytical Results Summary Table - Mercury
Port Refinery Site (55 Hillandale Road)
Rye Brook, Westchester County, New York
February 5, 2019

RST 3 Sample Number	EPA RSL for Residential Air ¹	190205-ASL01-AS01-01	190205-ASL01-AS08-01	190205-ASL02-AS02-01	190205-ASL03-AS03-01
Sampling Date		2/5/2019	2/5/2019	2/5/2019	2/5/2019
Sample Matrix		Air ²	Air ²	Air ²	Air ²
Mercury					
Mercury	0.31	(0.200) U	(0.182) U	(0.193) U	(0.274) U

RST 3 Sample Number	EPA RSL for Residential Air ¹	190205-ASL04-AS04-01	190205-ASL05-AS05-01	190205-ASL06-AS09-01	190205-ASL07-AS07-01
Sampling Date		2/5/2019	2/5/2019	2/5/2019	2/5/2019
Sample Matrix		Air ²	Air ²	Air ²	Air ²
Mercury					
Mercury	0.31	(0.173) U	(0.186) U	(0.277) U	(0.191) U

Notes:

RST 3 - Removal Support Team 3

¹U.S. Environmental Protection Agency (EPA) Regional Screening Level (RSL) for Residential Air corresponding to 10⁻⁶ Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2018

²U - No mercury is detected above Reporting Limits or EPA's RSL; reporting limit for each sample is shown in parenthesis

All analytical results and EPA RSLs reported in micrograms per cubic meter (µg/m³)

Attachment C

Photographic Documentation Log

Photographic Documentation Log
Port Refinery Site (55 Hillandale Road)
Rye Brook, Westchester County, New York
February 5, 2019



Photograph 1: View of air sampling location ASL01 adjacent to a sump in the basement. Air samples 190205-ASL01-AS01-01 and 190205-ASL01-AS08-01 were collected at this location. Air sampling was performed as part of a U.S. Environmental Protection Agency (EPA) Removal Action by Weston Solutions, Inc., Removal Support Team 3 (RST 3) and consisted of sorbent tubes attached to GilAir pumps with flow rates set between 0.15 and 0.25 liters per minute (L/min). All air sampling was conducted at 55 Hillandale Road, Rye Brook, New York.



Photograph 2: View of ASL02 adjacent to a sump in the basement. 190205-ASL02-AS02-01 was collected at this location.

Photographic Documentation Log
Port Refinery Site (55 Hillandale Road)
Rye Brook, Westchester County, New York
February 5, 2019



Photograph 3: View of ASL03 in a pipe in the basement. 190205-ASL03-AS03-01 was collected at this location. At this location, a small hole was drilled in the pipe and the sorbent tube was placed in the hole to collect the sample.

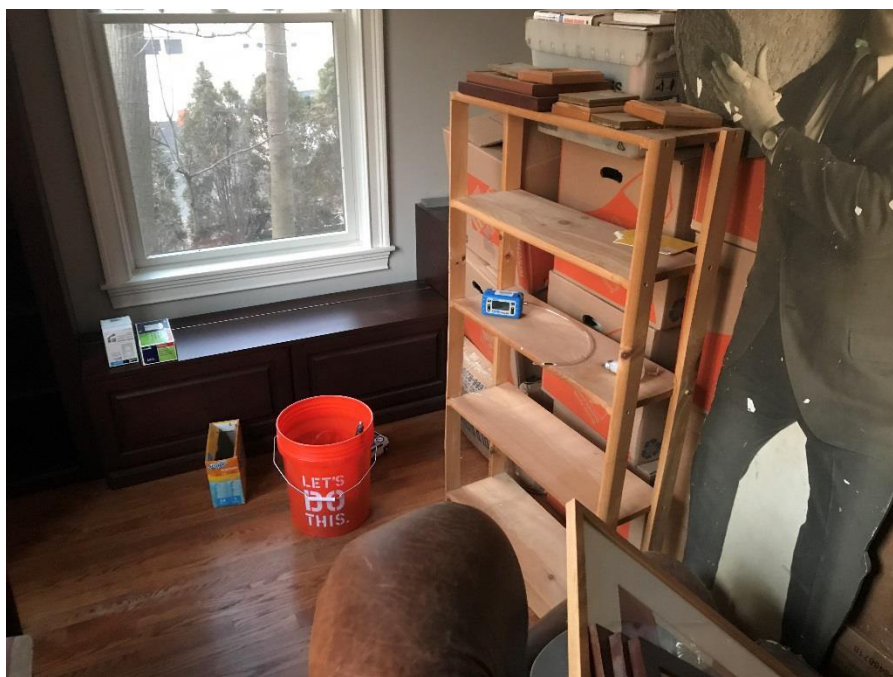


Photograph 4: View of ASL03 after air sampling was completed. The hole was sealed shut with caulk and white duct tape.

Photographic Documentation Log
Port Refinery Site (55 Hillandale Road)
Rye Brook, Westchester County, New York
February 5, 2019



Photograph 5: View of ASL04 on a counter in the breakfast room on the first floor. 190205-ASL04-AS04-01 was collected at this location.



Photograph 6: View of ASL05 on a bookshelf in the den on the first floor. 190205-ASL05-AS05-01 was collected at this location.

Photographic Documentation Log
Port Refinery Site (55 Hillandale Road)
Rye Brook, Westchester County, New York
February 5, 2019



Photograph 7: View of ASL06 on a desk in a bedroom on the second floor. 190205-ASL06-AS09-01 was collected at this location. The GilAir pump initially deployed at this location failed shortly after starting sample collection earlier in the morning. Upon observing the failed pump later in the morning, RST 3 utilized a different GilAir pump and the flow rate was set at 0.40 L/min in order to achieve a suitable sample volume.



Photograph 8: View of ASL07 on a bench in a bedroom on the second floor. 190205-ASL07-AS07-01 was collected at this location.

Attachment D

Chain of Custody Record

USEPA

Date Shipped: 2/5/2019

Carrier Name: FedEx

Airbill No: 7743 9982 7204

CHAIN OF CUSTODY RECORD

Contact Name: Michael Lang

Contact Phone: 908-565-2974

RUSH!

No: 2-020519-0370-0117-0001

Cooler #: 1

Lab: Test America Laboratories, Inc.

Lab Phone: 602-437-3340

RFP # 522


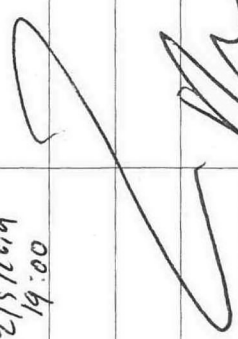


117436

Lab #	Sample #	Analyse s	Matr ix	Sample Date	Sample Time	Numb Cont	Container	Prese rative	Start Flow Rate	Stop Flow Rate	Volume	Start_Da te	Start_Ti me	Stop_Da te	Stop_Ti me	Total_T ime
-01	190205-ASL01-AS01-01	Mercury	Air	2/5/2019	15:04	1	Anasorb 200 mg tube	None	0.23989	0.2237	113.81	2/5/2019	6:53:00 AM	2/5/2019	3:04:00 PM	491
-02	190205-ASL01-AS08-01	Mercury	Air	2/5/2019	15:05	1	Anasorb 200 mg tube	None	0.2621	0.26375	124.61	2/5/2019	7:11:00 AM	2/5/2019	3:05:00 PM	474
-03	190205-ASL02-AS02-01	Mercury	Air	2/5/2019	15:05	1	Anasorb 200 mg tube	None	0.23946	0.24107	117.51	2/5/2019	6:56:00 AM	2/5/2019	3:05:00 PM	489
-04	190205-ASL03-AS03-01	Mercury	Air	2/5/2019	15:06	1	Anasorb 200 mg tube	None	0.15818	0.18535	82.98	2/5/2019	7:03:00 AM	2/5/2019	3:06:00 PM	483
-05	190205-ASL04-AS04-01	Mercury	Air	2/5/2019	15:12	1	Anasorb 200 mg tube	None	0.27108	0.27153 4	131.58	2/5/2019	7:07:00 AM	2/5/2019	3:12:00 PM	485
-06	190205-ASL05-AS05-01	Mercury	Air	2/5/2019	15:15	1	Anasorb 200 mg tube	None	0.24632	0.25533	121.89	2/5/2019	7:09:00 AM	2/5/2019	3:15:00 PM	486
-07	190205-ASL06-AS09-01	Mercury	Air	2/5/2019	15:04	1	Anasorb 200 mg tube	None	0.4066	0.4177	82.03	2/5/2019	11:45:00 AM	2/5/2019	3:04:00 PM	199
-08	190205-ASL07-AS07-01	Mercury	Air	2/5/2019	15:03	1	Anasorb 200 mg tube	None	0.25476	0.25508	119.04	2/5/2019	7:16:00 AM	2/5/2019	3:03:00 PM	467

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY

Special Instructions: Please email results to s.sumbaly@westonsolutions.com and michael.lang@westonsolutions.com. Samples to be run for mercury analysis via NIOSH method 6009. 24 hour TAT, 1 week hardcopy TAT.

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Receipt
All Samples / All Analytes	 Westonsolutions.com	2/5/2019 19:00		 550-117436 Chain of Custody
			 550-117436 Chain of Custody	

2-6-19 0920 9001

(Ambs) FC PO

Attachment E

Validated Laboratory Analytical Data



Weston Solutions, Inc.
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1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-585-4400 • Fax: 732-225-7037
www.westonsolutions.com

The Trusted Integrator for Sustainable Solutions

REMOVAL SUPPORT TEAM 3
EPA CONTRACT EP-S2-14-01

RST 3-05-F-0048

TRANSMITTAL MEMO

To: Mr. Gezahegne Bushra, On-Scene Coordinator
Removal Action Branch
U.S. EPA, Region II

From: Smita Sumbaly, Data Reviewer
RST 3, Region II

Subject: Port Refinery Site (55 Hillandale Road)
Data Validation Assessment

Date: February 14, 2019

The purpose of this memo is to transmit the following information:

- Data validation results for the following parameters:
Mercury 8 Samples
- Matrices and Number of Samples
Air 8 Samples
- Sampling Date: February 5, 2019

The final data assessment narrative and original analytical data package are attached.

cc: RST 3 SPM: Michael Lang
RST 3 SITE FILE TDD #: TO-0370-0117
RST 3 ANALYTICAL TDD #: TO-0370-0126
TASK#: 5126



U.S. ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: February 14, 2019

TO: Mr. Gezahegne Bushra, On-Scene Coordinator
U.S. EPA, Region II

FROM: Smita Sumbaly
RST 3 Data Review Team

SUBJECT: QA/QC Compliance Review Summary

As requested quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated as applicable:

Data Completeness	Holding Time
Calibration, Initial	Calibration, Continuing
Blanks	Laboratory Control Sample

Any statistical measures used to support the following conclusions are attached so that the information may be reviewed by others.

Summary of Results

Mercury

Acceptable as Submitted	<u> X </u>
Acceptable with Comments	<u> </u>
Unacceptable, Action Pending	<u> </u>
Unacceptable	<u> </u>

Data Reviewed by: Smita Sumbaly 

Date: 2/14/2019

Approved By: 

Date: 2/14/2019

Area Code/Phone No.: (732) 585-4410

NARRATIVE

PCS No.: 5126/RFP No.: 522

SITE NAME: Port Refinery Site
55 Hillandale Road
Westchester County
Rye Brook, New York 10578

Laboratory Name: TestAmerica Laboratories, Inc., 4625 East Cotton Centre Blvd., Phoenix, AZ
85040.

INTRODUCTION:

The laboratory's portion of this case consisted of eight air samples, for mercury analysis. These samples were collected on February 5, 2019. The TestAmerica Job Number is: 550-117436-1.

The laboratory reported No problem(s) with the receipt of these samples.

The laboratory reported No problems with the analysis of Mercury.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the following forms.

Appropriate Form Is and Chain of Custody have been copied from the original data package and appended to the data assessment narrative for reference.

Inorganic:

<u>Y</u> Holding Time	<u>Y</u> Calibration, Initial
<u>Y</u> Calibration, Continuing	<u>Y</u> Continuing Calibration Blanks
<u>Y</u> Method Blanks	<u>Y</u> Laboratory Control Sample
<u>Y</u> Data Completeness	

Comments: Refer to Data Assessment Narrative.

Title: Evaluation of Mercury Data
Data Assessment Narrative

NIOSH Method 6009

RFP # 522/TASK #5126

Site: Port Refinery Site

Lab: TestAmerica Laboratory, Inc.

TestAmerica Job Number: 550-117436-1

ANALYSIS: Mercury

No. of Samples/Matrix: 8/Air

CONTRACTOR: Weston Solutions, Inc., Removal Support Team 3 (RST 3)

Reviewer: SMITA SUMBALY

A.2.1 Validation Flags-

The following flags have been applied in red by the data validator and must be considered by the data user.

J-

This flag indicates the result qualified as estimated.

Red- Line-

A red-line drawn through a sample result indicates an unusable value. The red-lined data are known to contain significant errors based on documented information and must not be used by the data user.

Fully Usable Data-

The results that do not carry "J" or "red-line" are fully usable.

A.2.2 The data assessment is given below and on the attached sheets.

On February 5, 2019, the U.S. Environmental Protection Agency (EPA) Region II and RST 3 sampling personnel collected eight air samples, for mercury analysis from the Port Refinery Site, located in 55 Hillandale Road, Westchester County, Rye Brook, New York 10578. Samples for mercury analysis were shipped via FedEx by RST 3 Site Project Manager under chain of custody for the requested analysis to TestAmerica Laboratories, Inc., 4625 East Cotton Centre Blvd., Phoenix, AZ 85040. TestAmerica verified that the samples were received intact and properly custody-sealed.

Method Summary: Air samples were analyzed for mercury according to National Institute for Occupational Safety and Health (NIOSH) Method Number 6009, by cold vapor atomic absorption (CVAA) at 253.7 nanometers (nm). Air samples were collected using air samplers consisting of sorbent tubes [6 x 70 millimeters (mm) size, 200 milligrams (mg) sorbent] and GilAir pumps with flow rates set between 0.15 and 0.25 Liters/minute (L/min) for a period of eight hours.

Field sample identification (ID) and laboratory ID numbers are as follows:

Field Sample ID	Lab Sample ID	Matrix	Analysis	Sampling Date
TestAmerica Job Number: 550-117436-1				
190205-ASL01-AS01-01	550-117436-1	Air	Mercury	2/05/2019
190205-ASL01-AS08-01	550-117436-2	Air	Mercury	2/05/2019
190205-ASL02-AS02-01	550-117436-3	Air	Mercury	2/05/2019

Title: Evaluation of Mercury Data
Data Assessment Narrative

NIOSH Method 6009

Field Sample ID	Lab Sample ID	Matrix	Analysis	Sampling Date
TestAmerica Job Number: 550-117436-1				
190205-ASL03-AS03-01	550-117436-4	Air	Mercury	2/05/2019
190205-ASL04-AS04-01	550-117436-5	Air	Mercury	2/05/2019
190205-ASL05-AS05-01	550-117436-6	Air	Mercury	2/05/2019
190205-ASL06-AS09-01	550-117436-7	Air	Mercury	2/05/2019
190205-ASL07-AS07-01	550-117436-8	Air	Mercury	2/05/2019

All samples were reviewed for the following quality control (QC) parameters. All QC results were evaluated, but only non-compliant QC observations, if any, are discussed in detail in this report.

- Holding Time
- Initial Calibration
- Initial Calibration Verification (ICVs), including Initial Calibration Blank (ICBs)
- Continuing Calibration Verification (CCVs), Including Continuing Calibration Blank (CCBs)
- Method Blank
- Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD)
- LCS/LCSD Relative Percent Difference (RPD)

HOLDING TIMES: For mercury analysis, the 30-day sample preparation holding time was used to evaluate air sample results. All samples were analyzed within 30 days of sample collection.

SAMPLE CONDITION: The laboratory received samples in good condition, properly preserved, and on ice.

CALIBRATION: The correlation coefficient (r^2) of standard concentration versus absorbance readings is greater than ($>$) 0.995 for linear calibration curves generated in the data package.

RAW DATA: The laboratory provided the supporting raw data for this package. This data package contains summary of analytical results, blank results, initial & continuing calibration recovery, method blank result, laboratory control sample and laboratory control sample duplicate results, and sample analysis run log.

INITIAL CALIBRATION VERIFICATION/CONTINUING CALIBRATION VERIFICATION: ICV/CCV's were run at appropriate intervals as noted on the Calibration Summary form. All ICV/CCV recoveries are within the acceptable range of 90 to 110%.

LABORATORY CONTROL SAMPLES/ LABORATORY CONTROL SAMPLE DUPLICATE (LCS/LCSD): LCS and LCSD recoveries are within the acceptable range of 80-120%. RPD was less than ($<$) 20%.

Title: Evaluation of Mercury Data
Data Assessment Narrative


NIOSH Method 6009

Mercury results were not detected in any samples. All QC results were acceptable for mercury analysis; none required qualifications.

A.2.3 Contract Problem/Non-Compliance:

None

Contractor Reviewer:


Signature

2/14/19
Date:

Verified by:


Signature

2/14/19
Date:

OTHER ANALYTES WORK TABLE

PROJECT: Port refinery Site

CLIENT SAMPLE ID NUMBER	LAB ID NUMBER	Sample Final Volume (mL)	Sample Volume (Liters)	Mercury Results (ug/m3)	Mercury Results (ug/Sample)	Laboratory Reporting Limits - (ug/Sample)
TestAmerica Job Number: 550-117436-1						
190205-ASL01-AS01-01	550-117436-1	50 mL	113.81 L	<0.200	<0.0227	0.0227
190205-ASL01-AS08-01	550-117436-2	50 mL	124.61 L	<0.182	<0.0227	0.0227
190205-ASL02-AS02-01	550-117436-3	50 mL	117.51 L	<0.193	<0.0227	0.0227
190205-ASL03-AS03-01	550-117436-4	50 mL	82.98 L	<0.274	<0.0227	0.0227
190205-ASL04-AS04-01	550-117436-5	50 mL	131.58 L	<0.173	<0.0227	0.0227
190205-ASL05-AS05-01	550-117436-6	50 mL	121.89 L	<0.186	<0.0227	0.0227
190205-ASL06-AS09-01	550-117436-7	50 mL	82.03 L	<0.277	<0.0227	0.0227
190205-ASL07-AS07-01	550-117436-8	50 mL	119.04 L	<0.191	<0.0227	0.0227

< - less than - Not Detected

RL - Reporting Limit

Note: - RL reported as microgram per cubic meter (ug/m³) on the Form Is for the air matrix have been adjusted to reflect the sample volume.

ML - Milliliter

L - Liter

Definitions/Glossary

Client: Weston Solutions, Inc.
Project/Site: 2-020519-0370-0117-0001

TestAmerica Job ID: 550-117436-1
SDG: RFP#522

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
550-117436-1

Comments

No additional comments.

Receipt

The samples were received on 2/6/2019 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

IH - Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Weston Solutions, Inc.
Project/Site: 2-020519-0370-0117-0001

TestAmerica Job ID: 550-117436-1
SDG: RFP#522

Client Sample ID: 190205-ASL01-AS01-01

Lab Sample ID: 550-117436-1

☐ No Detections.

Client Sample ID: 190205-ASL01-AS08-01

Lab Sample ID: 550-117436-2

☐ No Detections.

Client Sample ID: 190205-ASL02-AS02-01

Lab Sample ID: 550-117436-3

☐ No Detections.

Client Sample ID: 190205-ASL03-AS03-01

Lab Sample ID: 550-117436-4

☐ No Detections.

Client Sample ID: 190205-ASL04-AS04-01

Lab Sample ID: 550-117436-5

☐ No Detections.

Client Sample ID: 190205-ASL05-AS05-01

Lab Sample ID: 550-117436-6

☐ No Detections.

Client Sample ID: 190205-ASL06-AS09-01

Lab Sample ID: 550-117436-7

☐ No Detections.

Client Sample ID: 190205-ASL07-AS07-01

Lab Sample ID: 550-117436-8

☐ No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Phoenix

Accreditation/Certification Summary

Client: Weston Solutions, Inc.
Project/Site: 2-020519-0370-0117-0001

TestAmerica Job ID: 550-117436-1
SDG: RFP#522

Laboratory: TestAmerica Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		154268	07-01-19

Method Summary

Client: Weston Solutions, Inc.
Project/Site: 2-020519-0370-0117-0001

TestAmerica Job ID: 550-117436-1
SDG: RFP#522

Method	Method Description	Protocol	Laboratory
PE-MET-013	NIOSH 6009	NIOSH	TAL PHX
Tube Prep	Preparation, Air Sampling Tube	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Sample Summary

Client: Weston Solutions, Inc.
Project/Site: 2-020519-0370-0117-0001

TestAmerica Job ID: 550-117436-1
SDG: RFP#522

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-117436-1	190205-ASL01-AS01-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-2	190205-ASL01-AS08-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-3	190205-ASL02-AS02-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-4	190205-ASL03-AS03-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-5	190205-ASL04-AS04-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-6	190205-ASL05-AS05-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-7	190205-ASL06-AS09-01	Air	02/05/19 00:00	02/06/19 09:20
550-117436-8	190205-ASL07-AS07-01	Air	02/05/19 00:00	02/06/19 09:20

COVER PAGE
IH - METALS

Lab Name: TestAmerica Phoenix

Job Number: 550-117436-1

SDG No.: RFP#522

Project: 2-020519-0370-0117-0001

Client Sample ID

190205-ASL01-AS01-01

190205-ASL01-AS08-01

190205-ASL02-AS02-01

190205-ASL03-AS03-01

190205-ASL04-AS04-01

190205-ASL05-AS05-01

190205-ASL06-AS09-01

190205-ASL07-AS07-01

Lab Sample ID

550-117436-1

550-117436-2

550-117436-3

550-117436-4

550-117436-5

550-117436-6

550-117436-7

550-117436-8

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL01-AS01-01

Lab Sample ID: 550-117436-1

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.200	0.200	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL01-AS08-01

Lab Sample ID: 550-117436-2

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.182	0.182	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL02-AS02-01

Lab Sample ID: 550-117436-3

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.193	0.193	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL03-AS03-01

Lab Sample ID: 550-117436-4

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.274	0.274	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL04-AS04-01

Lab Sample ID: 550-117436-5

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.173	0.173	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL05-AS05-01

Lab Sample ID: 550-117436-6

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.186	0.186	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL06-AS09-01

Lab Sample ID: 550-117436-7

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.277	0.277	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

1B-IN
INORGANIC ANALYSIS DATA SHEET
IH - METALS

Client Sample ID: 190205-ASL07-AS07-01

Lab Sample ID: 550-117436-8

Lab Name: TestAmerica Phoenix

Job No.: 550-117436-1

SDG ID.: RFP#522

Matrix: Air

Date Sampled: 02/05/2019 00:00

Reporting Basis: WET

Date Received: 02/06/2019 09:20

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	<0.191	0.191	ug/m3			1	PE-MET-013
7439-97-6	Mercury	<0.0227	0.0227	ug/Sample			1	PE-MET-013

Shipping and Receiving Documents

USEPA

Date Shipped: 2/5/2019

Carrier Name: FedEx

Airbill No: 77413 4982 72341

CHAIN OF CUSTODY RECORD

Contact Name: Michael Lang

Contact Phone: 908-565-2974

RUSH!

No: 2-020519-0370-0117-0001

Cooler #: 1

Lab: Test America Laboratories, Inc.



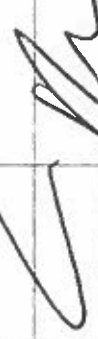
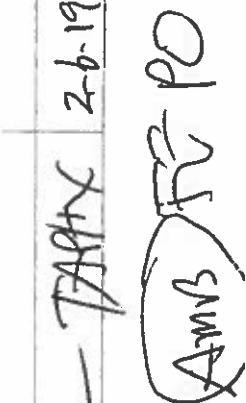
Lab Phone: 602-437-3340

117436

Lab #	Sample #	Analyse s	Matr ix	Sample Date	Sample Time	Numb Cont	Container	Prese rative	Start Flow Rate	Stop Flow Rate	Volume	Start Da te	Start Ti me	Stop Da te	Stop Ti me	Total T ime
-01	190205-ASL01-AS01-01	Mercury	Air	2/5/2019	15:04	1	Anasorb 200 mg tube	None	0.23989	0.2237	113.81	2/5/2019	6:53:00 AM	2/5/2019	3:04:00 PM	491
-02	190205-ASL01-AS08-01	Mercury	Air	2/5/2019	15:05	1	Anasorb 200 mg tube	None	0.2621	0.26375	124.61	2/5/2019	7:11:00 AM	2/5/2019	3:05:00 PM	474
-03	190205-ASL02-AS02-01	Mercury	Air	2/5/2019	15:05	1	Anasorb 200 mg tube	None	0.23946	0.24107	117.51	2/5/2019	6:56:00 AM	2/5/2019	3:05:00 PM	489
-04	190205-ASL03-AS03-01	Mercury	Air	2/5/2019	15:06	1	Anasorb 200 mg tube	None	0.15818	0.18535	82.98	2/5/2019	7:03:00 AM	2/5/2019	3:06:00 PM	483
-05	190205-ASL04-AS04-01	Mercury	Air	2/5/2019	15:12	1	Anasorb 200 mg tube	None	0.27108	0.27153	131.58	2/5/2019	7:07:00 AM	2/5/2019	3:12:00 PM	485
-06	190205-ASL05-AS05-01	Mercury	Air	2/5/2019	15:15	1	Anasorb 200 mg tube	None	0.24632	0.25533	121.89	2/5/2019	7:09:00 AM	2/5/2019	3:15:00 PM	486
-07	190205-ASL06-AS09-01	Mercury	Air	2/5/2019	15:04	1	Anasorb 200 mg tube	None	0.4066	0.4177	82.03	2/5/2019	11:45:00 AM	2/5/2019	3:04:00 PM	199
-08	190205-ASL07-AS07-01	Mercury	Air	2/5/2019	15:03	1	Anasorb 200 mg tube	None	0.25476	0.25508	119.04	2/5/2019	7:16:00 AM	2/5/2019	3:03:00 PM	467

Special Instructions: Please email results to s.sumbaly@westonsolutions.com and michael.lang@westonsolutions.com. Samples to be run for mercury analysis via NIOSH method 6009. 24 hour TAT, 1 week hardcopy TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Receipt
All Samples All Analytes	 William LST3	2/5/2019 19:00		
				
				

550-117436 Chain of Custody



550-117436 Chain of Custody